

**POLYMORPHISMS IN THE 5' LEADER CISTRON OF THE
 β_2 -ADRENERGIC RECEPTOR**

Abstract of the Invention

A novel polymorphic site in the 5' leader cistron of the β_2 -adrenergic receptor (β_2 AR) gene is disclosed. The polymorphisms present at this site result in different levels of inhibition of translation of β_2 AR mRNA. Compositions and
5 methods for genotyping this polymorphic site are disclosed. In addition, methods for using this genotype information are disclosed, including predicting genetic predisposition to a disease modified by β_2 AR expression and predicting a patient's bronchodilating response to β_2 -agonists.